

matters of classification brought prominently before him, although, especially in the case of the birds, it would have been well if the author had indicated that a very different systematic arrangement of those animals was adopted by most practical ornithologists.

Prof. Macalister's descriptions of the anatomical structure of the different great groups of animals are more precise and detailed than we are accustomed to see them in English manuals; and to these he has added particulars as to the modes of development observed in the different classes and orders, and even, in many cases, short notes upon the habits and mode of life of the animals composing these groups. In fact, by the adoption of a very concise and matter-of-fact style, and by printing details in a smaller type than the main facts of his work, our author has contrived to compress into his two volumes an enormous amount of valuable information. Partly for the sake of brevity, and partly with the view of explaining the numerous technical terms which have been introduced of late years into zoological literature, Prof. Macalister has employed these very freely, and indeed has incurred some small amount of blame at the hands of some of his critics, on account of the multitude of "hard words" with which his work literally bristles on every page. The blame, however, does not seem to us to rest with him, but rather with the ingenious inventors of these multifarious terms, who seem to imagine that not only every organ, but almost every part or modification of an organ must have its distinct name. Our author has endeavoured, to the best of his power, to furnish his readers with a guide to these names and their interpretation; and for this, as for the excellent general statement of morphological facts which he has produced, we think that students owe him a debt of gratitude.

MISCELLANEOUS.

The Sea-weeds of Salt Lake. By A. S. PACKARD, Jun.

THE attention of the visitor to the shores of the Great Salt Lake, Utah, is sometimes attracted by the small masses of Algæ which are seen to be suspended in the brine, and to be cast ashore in little wind-rows on the sandy shores. Four years ago, while connected with Hayden's U.S. Geological Survey of the Territories, I made an investigation of the life of the Great Salt Lake, especially of *Artemia fertilis* and *Ephedra gracilis*, and took pains to collect in alcohol, and also dry, specimens of these Algæ, as they had been unnoticed by botanists and collectors so far as I am aware. It is probable that these Algæ are almost the only source of food for the brine-shrimp, as they are diffused through the water in nearly equal abundance with the crustaceans themselves, and in no case, that I could see, grow attached to any objects in the lake or on the shore. The most common form (*Polycystis*) is a rounded, lobulated, green mass which lives suspended in the water.

Specimens of the Algæ collected were sent to Prof. W. G. Farlow, of Harvard University, from whom the following preliminary report has been received:—

“The Algæ which you collected in Salt Lake are very interesting, and, as far as I know, are the first which have ever been collected in that locality. Mr. Sereno Watson, the distinguished botanist of the King Survey, tells me that he examined a portion of Salt Lake for Algæ, but without success, and thinks it probable that very few plants will be found in the lake. The specimens you sent comprise two small packages of dried material and a small bottle of alcoholic specimens. The alcoholic material is scarcely determinable, as the specific characters of Algæ, such as would be expected to occur in Salt Lake, are generally lost by immersion in alcohol. The dried material I have soaked out and examined.

“It consists largely of grains of sand and remains of small animals, mixed with which are three species of Algæ. The most abundant Alga is one which forms irregular gelatinous masses, sometimes attaining a diameter of half an inch. The colour, apparently much faded in drying, is brownish with a tinge of bluish green*. It seems to me to be a species of *Polycystis*; and I am unable to refer it to any of the described species, and have called it provisionally *Polycystis Packardii*. Its distinguishing characters are the oblong shape of its cells, which are smaller than in any of the marine species of the genus which I have examined, and the firmness and lobulated form of the gelatinous substance in which they are imbedded. Besides the *Polycystis* there is a species of *Ulva*, using the word in the extended sense adopted by Le Jolis, which is in fragments, so that one can form no very accurate idea of its habit. The microscopic characters, however, show that it is, with scarcely any doubt, *Ulva marginata*, Ag., found on the coasts of Europe. The specimens from Salt Lake agree very well with specimens from the French coast which are considered by Le Jolis to be the species described by Agardh. The third Alga from Salt Lake is much less abundant than the others in the packages sent, and is also in poor condition for comparison with herbarium specimens. It is a species of *Rhizoclonium*; and it comes very near to *R. salinum*, Ktz. (*R. riparium*, Harv.), a common marine species of this country and also found in Europe near salt springs. The Salt-Lake plant has smaller cells and approaches *R. Kochianum*, a species also marine and found in saline regions.

“You will see, then, that two of the three species are recognizable as marine forms, while the third, in my opinion new, is at least not to be referred to a known marine form. As a rule, the Algæ found in saline regions belong to species found in brackish waters on the coast. One might expect to find a large variety of Ulvæ and Confervæ in Salt Lake; and it would be of interest to see how closely these inland forms approximate to the littoral forms of the eastern and western coasts.”—*Amer. Nat.*, Nov. 1879.

* The colour in life is an olive-green.—A. S. P.